AMERICAN OURNAL OF PHARMACY

PUBLISHED BY AUTHORITY OF THE

Philadelphia College of Pharmacy

PUBLICATION COMMITTEE

SAMUEL P. SADTLER, PH.D., LL.D. M. I. WILBERT, PH.M.

JOSEPH W. ENGLAND, PH.M.

JOSEPH P. REMINGTON, PH.M., F.C.S.

GEORGE M. BERINGER, PH.M.

AND THE EDITOR

HENRY KRAEMER, Ph.D., Editor

Vol. 88

ie d

e

n d

e

-

e d

r e

t

OCTOBER, 1916

No. 10

CONTENTS.

Some of the Early Teachers of Pharmacognosy in America. By Prof. Henry Kraemer
The Pharmaceutical Exhibition in Philadelphia. By M. I. Wilbert, Washington, D.C
Some Experiences in Preparing Emulsion of Silver Iodide. By Josiah C. Peacock and Bertha L. DeG. Peacock, Philadelphia
American Pharmaceutical Association: Minutes of the Atlantic City Meeting By Prof. Edwin L. Newcomb, Minneapolis, Minn
American Conference of Pharmaceutical Faculties: Seventeenth Annual Convention 473
National Association Boards of Pharmacy: Thirteenth Annual Convention. By Prof. Edwin L. Newcomb, Minneapolis, Minn

issued in Monthly numbers of not less than Price, \$3.00 per Annum, in advance.

SINGLE NUMBERS, SO CENTS BACK NUMBERS, SO CENTS

Address all communications to The American Journal of Pharmacy, 145 North Tenth Street, Philadelphia, Pa.

BUSINESS HELPS FOR ALL PHARMACISTS

THE DOUBLE COLUMN

STATES DISPENSATORY

EDITED BY WOOD, REMINGTON, AND SADTLER
NINETEENTH EDITION

This masterplece has received more approving comments than any previous edition. It is up-to-date, filled with information of a kind needed in the everyday work of the pharmacist, and includes the Pure Food and Drugs Act decisions. Imperial Svo. Cloth, \$7.00; Sheep, \$8.00; Half Russia, \$9.00. Potent lode

FIFTH EDITION

REMINGTON'S PHARMACY

BASED ON THE U. S. PHARMACOPOEIA (8TH REVISION) By JOSEPH P. REMINGTON, PH.M., PHAR. D., F.C.S.

A treatise on the modes of making and dispensing official, unofficial, and emporaneous preparations, with descriptions of their properties, uses, and see. Over 800 ILLUSTRATIONS.

1541 Pages. Large Swe. Clath, \$6.00; Sheep, \$6.50; Half Russia, \$7.00.

TABLET MANUFACTURE

Br JOSEPH R. WOOD, M.A., Ph.G.

This volume has been written, from knowledge gained by the author through any years of practical experience, to meet the needs of pharmacists who anufacture tablets, either in large or small quantities.

32 illustrations. 12me. Waterpreef Cloth, \$2.00 act.

ORDER FROM YOUR WHOLISALE DEALER, OR THE PUBLISHERS J. B. LIPPINCOTT COMPANY, PHILADELPHIA

American Journal of Pharmacy

ESTABLISHED IN 1825

Four preliminary numbers were published at different times until in 1829, when the publication of the regular volumes began. Since then the publication has been uninterrupted. During the period from 1829 to 1852 four numbers were published annually, except in 1847, when five numbers were published. From 1853 to 1870 six numbers were published. Since this time twelve numbers have been published annually.

Manuscripts should be sent to the Editor. It should be stated in this connection that the Editor does not assume any responsibility in connection with the views or investigations of contributors, other than to exercise general care in the selection of matter.

Contributors are allowed a reasonable number of copies of this Journal, free of charge, if applied for when the proof is returned.

Reprints, if desired, must be applied for when the proof is returned. The table below shows the approximate cost of reprints, the make-up of the pages to be identically the same as in the Journal. The actual cost may vary from the figures given, and will depend upon the amount of presswork, paper, binding, etc. Reprints containing half-tones may be expected to cost somewhat more than the rates given.

		CONTRACTOR OF THE PARTY OF THE	рр. 8 рр	. 16 pp.	Section 1 and 1 an	VITH TITLES
25 copies	. 12	PINCE DE LA CA	75 87-75			\$1.75
100 "			00 8.25 25 9.00	200	100 "	. 2.00
250 44	. 3.	The second second second	75 10.00	THE RESERVE AND ADDRESS OF THE PARTY OF THE	250 "	2.75

T8

ous day ons.

and and

A

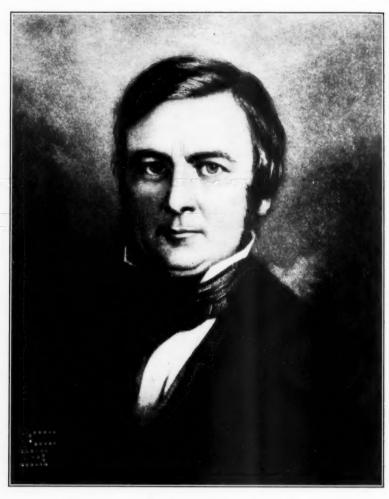
1829, ation abers shed, abers

this with care

NAL,

The the vary per, what

71.EB 1.75 2.00 2.25 2.75



Dr. Joseph Carson 1808-1876

Photograph from a mezzotint in the possession of Professor Carson's son, the Hon. Hampton L. Carson, Philadelphia.

THE AMERICAN JOURNAL OF PHARMACY

OCTOBER, 1916

SOME OF THE EARLY TEACHERS OF PHARMACOGNOSY IN AMERICA.

By Henry Kraemer. (Continued from p. 401) Prof. Joseph Carson.

Dr. Joseph Carson succeeded Doctor Griffith and held the Chair of Professor of Materia Medica from 1836 to 1850. He is probably best known for his two books on medical botany, which were illustrated with 100 large colored lithograph plates. The volumes are dedicated to Dr. George B. Wood, and reveal the friendship and extent of the influence of the latter. While Doctor Wood wrote nothing that might be compared to this magnificent work, yet if he encouraged young men like Joseph Carson to follow their ideals and complete their allotted tasks, much credit is due him. This work is the first dealing with botany that bears the imprint of a professor in the Philadelphia College of Pharmacy on its title page. The work is not confined to indigenous medicinal plants, but embraces those of an exotic character. The illustrations are most beautiful and the text very illuminating. He was also editor of the AMERICAN JOURNAL OF PHARMACY at the time of its greatest prosperity. His own zeal in his scientific contributions stimulated his colleagues and others to contribute equally valuable articles. It has always seemed strange to me that no adequate account of his life was published in the AMERICAN JOURNAL OF PHARMACY, and that in connection with the names of the other illustrious members of our Faculty his should have been overlooked. It was largely with the idea of rectifying this omission that I prepared this address. I have been very fortunate to have the coöperation of his son, the Hon. Hampton L. Carson, to furnish me an accurate biographical sketch for inclusion here.

Joseph Carson, born in Philadelphia, Pa., April 19, 1808, died December 30, 1876, in his sixty-ninth year. His paternal ancestors, originally Scotch, passed, like so many of their countrymen, into Ireland, during the reign of the Stuarts, to escape religious tyranny. In 1735, three brothers, Andrew, William, and Joseph Carson, emigrated to America from Londonderry, and settled in Philadelphia, the latter (the grandfather of the subject of this notice) becoming a shipping merchant, who signed the non-importation agreement, and, like Robert Morris, loaned his credit to the Continental Congress, during the struggle for American Independence. His son, also named Joseph, was also a merchant, and married Elizabeth Lawrence, third daughter of Isaac Lawrence, who had removed from Newton, Long Island, to Elizabethtown, N. J., and there married Mary Ann Hampton, daughter of Jonathan Hampton, who was a captain in the Continental Army and had fought at Monmouth. Of their five children, the future Prof. Joseph Carson was the eldest.

His early education was obtained at the Germantown Academy, under the direction of John Brewer, a highly respected teacher in his day. Later he was placed under the tuition of a Mr. White in Philadelphia. As a boy he was studious and attentive, and at the age of fifteen entered the Sophomore Class of the University of Pennsylvania, at that time under the provostship of Rev. Frederick Beasley, D.D., from which he graduated as a Bachelor of Arts on July 27, 1826.

He then entered the drug store of Mr. Edward Lowber, and received an impulse to the study of botany, the doctor being a botanist. He soon became an enthusiastic lover of plants, making an extensive collection for an herbarium, and was led to investigate their medicinal virtues. Thus did he lay the foundation of his future work and fame as a botanist. He then entered as a private pupil the office of Dr. Thomas J. Hewson, one of the distinguished physicians of the day, and from his preceptor's office matriculated at the Medical Department of the University of Pennsylvania, receiving his degree of Doctor of Medicine in March, 1830. His graduating thesis was on "Animal Temperature," exhibiting research, method, clearness of thought, simplicity and directness of style, and sound reasoning, qualities which distinguished him as a writer and teacher in after-life. Soon after his graduation he was chosen one of the resident physicians in the Philadelphia Almshouse, then situated in Tenth Street, between Spruce and Pine. In the summer of

1831 he sailed as surgeon on the ship Georgiana, commanded by Captain John Land, for the East Indies, visiting Madras, Bombay, and Calcutta, returning to Philadelphia in August of 1832. He kept an interesting journal, with tables neatly and methodically arranged, of latitude and longtitude, the temperature of the sea and air, with excellent drawings, some of them colored, of the flora and fauna, and with an "Essay on Sea Sickness," with its physiological causes and conditions well presented.

On his return the yellow fever was raging in Philadelphia, and the young doctor so well performed his part that the tradition of his devotion and good judgment still survives. He then entered upon active general practice, eventually gaining an honorable place as a practitioner of obstetrics. The night work and exposure somewhat overtaxed his strength, and he gradually withdrew into more congenial and less exhausting fields of exertion, though never at any time abandoning general family practice. In 1836 he was chosen Professor of Materia Medica in the Philadelphia College of Pharmacy, a post which he held until 1850, when he was chosen to the same chair in the Medical Department of the University of Pennsylvania, as the successor of Dr. George B. Wood, a professorship which he held until May, 1876, when he resigned on account of illhealth, and was then made a Professor Emeritus. While occupying these positions he was librarian of the Academy of Natural Sciences for several years, building up and arranging its herbarium, and publishing a catalogue of its books. He edited the AMERICAN JOURNAL OF PHARMACY, assisted by Doctor Bridges, and later by Prof. William Procter, contributing twenty-six original papers. He was the first botanist to describe fully and give prominence to the genus Alstræmeria as a source of edible fecula. At the same time he edited with notes two editions of Pereira's Materia Medica, and in 1847 published his beautiful illustrations of medical botany in two large quarto volumes, having drawn and colored many of the plates with his own hand. The plates were accompanied by descriptive letter-press, and were printed and issued by Robert P. Smith, of Philadelphia. Copies of this work are now hard to obtain and are highly prized.

In 1844 he added to his labors as a teacher by lecturing on pharmacy during many summers in the Medical Institute of Philadelphia, which had grown up as a summer school of medicine out of a private association of the pupils of Dr. Nathaniel Chapman. For five years

-from 1849 to 1854—he served as physician to the Lying-in Department of the Pennsylvania Hospital as the successor of Dr. Charles D. Meigs. He served as curator of the American Philosophical Society for seventeen years. As a member of the National Convention for Revising the Pharmacopæia of the United States, he served actively in 1860 and again in 1870 as the chairman of the Committee on Revision and as president of the Convention. 1862 he was president of the Philadelphia County Medical Society, and was active as physician of the Foster Home and the Hospital of the Protestant Episcopal Church. In 1869, after years of patient labor, he published "A History of the Medical Department of the University of Pennsylvania, from its Foundation in 1765, with Sketches of the Lives of Deceased Professors." Upon this work his fame as a medical historian will safely rest. In the course of his preparation for this work he explored and established the connection between the most famous American school of medicine and the Medical Department of the University of Edinburgh, and made an interesting and unique collection of medical prints and autograph letters.

His medical literary career, beginning in 1835 with an "Essay on Egyptian Mummies," contributed to the American Quarterly Review, and ending in 1872 with ten chapters upon "Puerperal Eclampsia" and "Lectures on Emetics," embraced no less than seven closely printed pages of the mere titles of his papers, attesting the range and thoroughness of his scientific scholarship. His "Synopsis of Lectures on Materia Medica and Pharmacy," with lectures on the "Modus Operandi of Medicines," passed through four editions.

As a teacher he was a great favorite with his classes, always sympathetic and generous, and the recognized friend of students seeking aid and advice. A fluent but very deliberate speaker, an entire master of the branches that he taught, free from charlatanry, considerate and kindly, his career, as was said by one who knew him intimately well, "a fair exemplification of how much may be achieved by a man of industrious ways, coupled with absolute probity and good sense, in the face of restricted means and imperfect health."

In 1869 Professor Carson published "A History of the Medical Department of the Univeristy of Pennsylvania, from its Foundation in 1765, with Sketches of the Lives of Deceased Professors." This admirable work occupied much time in its preparation and entailed a large amount of work. In his characteristic liberal manner Doctor

Carson had cited the references from every source from which he obtained information. The following is a complete list of his articles which were published in the AMERICAN JOURNAL OF PHARMACY.

"On the Erythraea Chilensis," 1834, p. 276.

"Medico-Botanical Notices," 1837, p. 196.

"Notes on the Taccaceæ," 1837, p. 306.

"Notice of the True Jalap Plant," 1838, p. 28.

"Medico-botanical Notices," 1838, p. 105.

"Note upon Gentiana Chirayita," 1840, p. 20.

"Note upon the Cinchona Bicolorata," 1841, p. 49.

- "Observations on Zamia Integrifolia—the Plant which Affords Florida Arrow Root," 1842, p. 22.
 - "On an Article Called Texas Sarsaparilla," 1843, p. 251.

"Notice of Some Brazilian Drugs," 1845, p. 8.

"Drimys Chilensis DeCandolle, the Winter's Bark of Chili," 1847, p. 81.

"Drimys Winteri (Forster) DeCandolle, (Winter Bark Tree), with a Figure," 1847, p. 161.

"An Essay on Scammony, with an Examination into the Qualities of the Drug Found in the Market," 1848, p. 1.

"Article on Black Helebore (Helleborus niger)," 1848, p. 161.

"Article on Quassia Amara, L." (with a Plate), 1848, p. 257.

"Article on Quassia Excelsa" (with a Plate), 1849, p. 1.

" Note on India Opium," 1849, p. 193.

"Note on India Cinnamon and Red Sarsaparilla," 1849, p. 296.

"Note on Nectranda Puchury, Major and Minor, as the Source of Pichurim Oil and Pichurim Bark and Bean of Commerce," 1855, p. 385.

"Note upon the Fecula of Alstræmeria," 1860, p. 289.

"On the Source of Balsam of Peru," 1860, p. 296.

PROF. ROBERT P. THOMAS.

Dr. Robert P. Thomas succeeded Professor Carson on his election as Professor of Materia Medica in the University of Pennsylvania. He was probably the ablest lecturer on materia medica in the United States at that time. There was only one man his equal, and that was Dr. George B. Wood, who, as we recall, retired from professorial duties in 1859. There is a very appreciative sketch of him in the American Journal of Pharmacy of 1864, pp. 191 and 277.

His decease at the age of 43 was rather pathetic, as it occurred within 48 hours of the conclusion of one of his lectures. He was stricken down with spotted fever the morning after this lecture and died the following day. It was a great blow to his students and his colleagues at the College. The esteem in which he was held is best shown by the resolutions of the Zeta Phi, a student association of the College, and of which committee Albert E. Ebert was chairman, which read as follows:

"Whereas, It has pleased an All-wise Providence to remove from amongst us our worthy and esteemed professor, Dr. Robert P. Thomas, who has so long filled the Chair of Materia Medica in this College; therefore,

"Resolved, That we, as members of the 'Zeta Phi Society of the Philadelphia College of Pharmacy,' tender to the afflicted family of Dr. R. P. Thomas our heartfelt sympathy in their irreparable loss.

"Resolved, That we sympathize with the Board of Trustees and the College at large in the loss of so talented and warm-hearted a fellow-member, cut off suddenly as he has been in the midst of his usefulness and growing reputation.

"Resolved, That the members of this society, who have listened to his clear and lucid instruction, and have felt the influence of his calm and courteous demeanor, will ever cherish the remembrance of his virtues, and, we trust, will be influenced by his example throughout our lives.

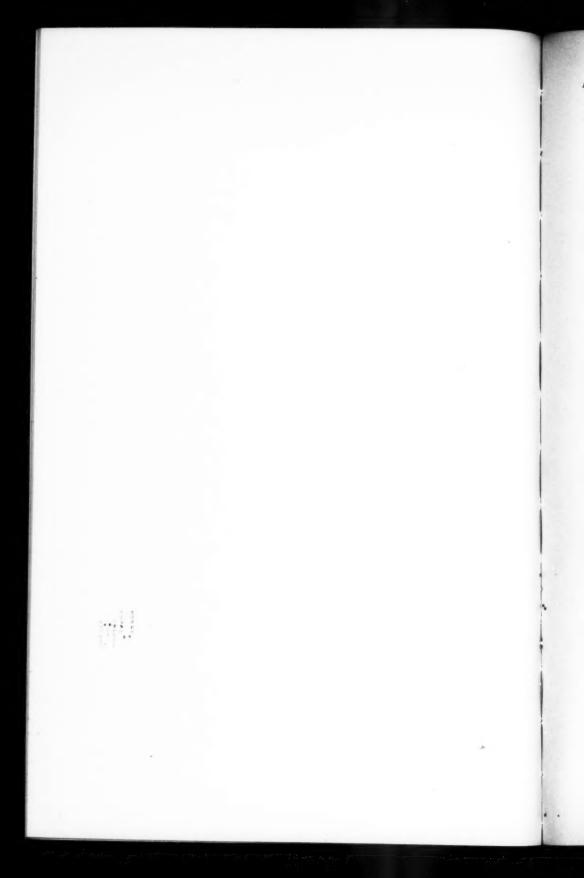
"Resolved, That this preamble and resolutions be entered on the minutes of this society; that a copy be forwarded to the family of the deceased, and another to the Trustees of the College."

Doctor Thomas was distinguished from his predecessors more especially for consideration he gave to the drugs of the market, and to-day would be ranked as a pharmacognocist. He revised both the formularies of Griffith and Ellis, and besides wrote a great many papers which were published in the American Journal of Pharmacy and the *Proceedings of the A. Ph. A.*

Doctor Thomas was born May 29, 1821, the year of the founding of the College, and might be well termed one of its founders, by virtue of the work which he accomplished. He was one of the first members of the Faculty who ended his career in its services. His biography is exceedingly stimulating. He worked his way up at great odds, and at the time of his untimely death was one of the most beloved and influential teachers in Pharmacognosy. His early



Dr. Robert P. Thomas 1821-1864



education was in the Westtown Boarding School, in Chester County, Pa. Here he gained a good English education, with the rudiments of classical learning, and doubtless acquired that taste for natural science which was conspicuous in his later years. At the age of 16 he entered the counting-house of a firm of shipping merchants. His ambition, however, was directed toward the medical profession. He employed his hours of recreation in acquiring knowledge and improving himself. In order to promote his medical education, he obtained the appointment, at the age of 24, as assistant apothecary to the Philadelphia Dispensary, a position he filled for a year, with great fidelity and satisfaction to all with whom he was associated. In the year 1847 he took the degree of Doctor of Medicine in the University of Pennsylvania.

Doctor Thomas must have had his full share of those discouragements which await the young physician during the years which, in a large city, invariably intervene between the period of graduation and the time in which his talents and industry may win for him an honorable reputation and an independent support. No special good fortune surrounded his entrance upon his chosen career, and he was dependent upon his own indomitable energy and perseverance, with the encouragement of strong friends, for the degree of success to which he attained. His first teaching position was as demonstrator of anatomy in the Franklin Medical College. He was elected to the Chair of Materia Medica when Doctor Carson vacated it for a similar position in the University of Pennsylvania. He immediately entered on the duties of his office with characteristic zeal, and from the first fulfilled its requirements to the entire satisfaction of all. With the class he was popular, from the clearness of his instructions, the urbanity of his manners, and the genuine goodness of his heart. To the members of the College, who came in contact with him at its meetings and elsewhere, he attached himself closely in relations of confidence and friendship.

In the investigation and illustration of his lectures Doctor Thomas was indefatigable, and, while he added to his own cabinet, he enriched also that belonging to the College. His writings, published in the American Journal of Pharmacy, in the *Proceedings of the A. Ph. A.*, and elsewhere, evince close observation and analysis, and are written with clearness and perspicuity. Of these we may specify his paper on "Texas Sarsaparilla," published in 1855, showing that this drug is not identical with the true Sarsaparilla; his

paper on "Garlic," published in 1860, describing a variety of this drug found in the Philadelphia market, and which, he concludes, is not a distinct species, but a hybrid, partaking of the nature of the garlic and of the leek; and a short essay on the "Culture of Elaterium," in 1862—all exhibiting evidences of his talent and industry in the special department of Pharmacognosy.

Some interesting experiments on the influence of morphia in the color-test for strychnia, detailed in a paper published in the American Journal of Sciences, were exhibited by him at one of the Pharmaceutical meetings of this College in 1861. The presence of morphia was shown to modify the color-test for strychnia, as first ascertained by Dr. J. J. Reese, so as to render it quite unreliable for medico-legal investigations, as usually applied. He suggested the admirable expedient of isolating the strychnia from the morphia, where they are associated, by use of chloroform in the presence of an excess of caustic potassa, thus avoiding the interference in cases requiring the test.

The most extensive editorial labors of Doctor Thomas were connected with the revision of "Griffith's Universal Formulary" and "Ellis's Medical Formulary."

"The death of Dr. Thomas was sudden and very unexpected. He lectured to his class in this College on the evening of the first of February, apparently in health, and rather unusually lively and full By those closely connected with him, however, it of anecdote. was observed that he appeared not as well as usual, and on the following morning, although he rose, he complained of symptoms which induced him to forego his usual round of duties, and very soon after to retire to bed. Alarming symptoms soon appeared, which called for prompt efforts to stay the progress of a disease which was rapidly loosening his hold on life. Every effort failed, and in thirty-six hours from the first appearance of the disease his spirit passed away. A subtle epidemic influence, which has visited many of our citizens during the past winter and has been generally characterized as spotted fever, is believed to have undermined thus rapidly his vitality without developing its usual visible signs. Thus, in the forty-third year of his age—in the full strength of manhood with energies unrelaxed, and girded with the strength of experience for future usefulness-our associate, friend and preceptor, has been called from among us."

PROF. EDWARD PARRISH.

The seventh incumbent of the Chair of Materia Medica was Prof. Edward Parrish. He ordinarily is classed among the eminent professors in pharmacy of this College. His career is exceedingly interesting. He was a scholar, an associate of men of letters, a born teacher, and a great executive. He possessed those qualities of mind and heart which caused him to adorn and develop every activity with which he was connected. His work in the Philadelphia College of Pharmacy, in the development of Pharmacognosy, is worthy of more than passing interest. It will be noted, of the six professors who held the Chair of Botany and Materia Medica, that all of them were medical men. Indeed, it was the established tradition that one of the qualifications for this position was that the candidate should possess the degree of M.D. Upon the resignation of Doctor Carson in 1850, Professor Parrish was a candidate, and he failed of election because of the tradition referred to. Upon the death of Doctor Thomas in 1864, Mr. Parrish again became a candidate and was elected, and held that position until 1867, when he exchanged professorships with Professor Maisch, who was then Professor of Pharmacy. As we shall see later, Professor Maisch was eminently qualified for the position in botany and materia medica, but probably could not have been elected directly by virtue of the prevalent tradition. It is thus seen that Professor Parrish's entrance into the Faculty of our College was the means of establishing a new precedent, and one which rightfully should be followed. It was this era to which Professor Carson had reference in his "Memoir on Samuel Jackson" when he stated that during the early days of the College the members did not feel that there were any pharmacists of sufficient calibre to assume the great responsibility of instructing the students of the College. Professor Parrish is especially known to pharmacists through his book on "Practical Pharmacy," the first edition of which appeared in 1855. He also prepared many important addresses, and some of them relating to the history of our College are very illuminating. Professor Parrish published a number of papers on pharmaceutical subjects, a large number being strictly of a pharmacognostical character; the latter are of very great value and touch upon practical questions, being worthy of a place in the history of practical pharmacognosy. Professor Parrish always took an active part in legislative work as related to pharmacy, and was instrumental in securing the Pharmacy Act of 1872. He was also one of the founders and the first president of Swarthmore College.

Professor Parrish came of old Quaker stock, the family being older even than the State of Pennsylvania itself. The members have been known particularly for their educational work, and the name and career of Edward Parrish stand out very prominently. He was born in 1820 and graduated from the Philadelphia College of Pharmacy in 1842. In the following year he became a member of the College and from 1854 to 1864 was Secretary of this Institution. Very early he began to engage in research and literary work and we find in 1842, in the American Journal of Pharmacy, a publication of his graduation thesis entitled "Statice Caroliniana, with the Chemical Analysis of the Root of this Plant." The work was very carefully done and his results still stand as authoritative with regard to constituents of this drug. Among his contributions to pharmacognosy which were published in the American Journal of Pharmacy the following may be mentioned:

The Cultivation of Opium in Armenia. Being a translation from

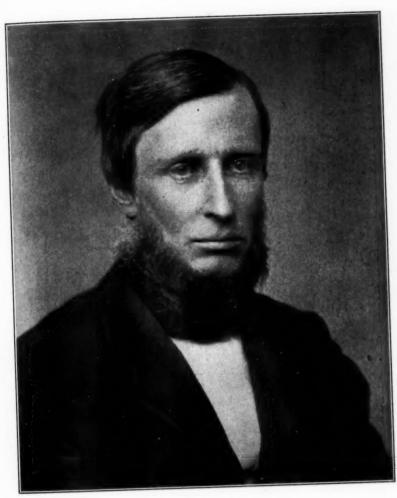
the French of M. H. Gaultier de Claubry, 1849, p. 14.

Notes on the Following Barks: Melambo or Matias Bark; Soap Bark and Quassia Bark, 1857, p. 103.

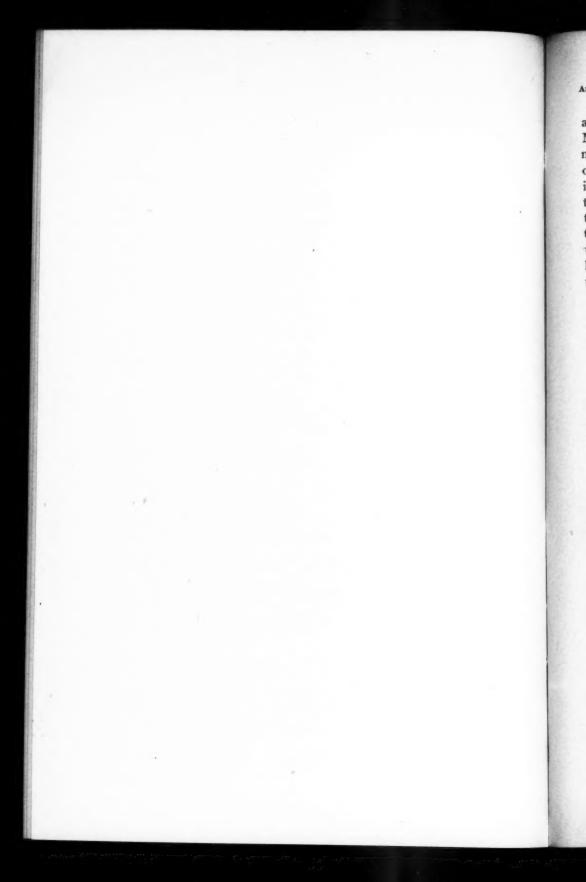
Pharmaceutical Notes of Travel, 1859, pp. 1, 97 and 209.

Lactucarium and its Preparations, 1860, p. 225.

The extent of Professor Parrish's influence is seen from the incident which occurred on May 10, 1909, and which is related in the American Journal of Pharmacy for 1909, p. 306. This day marked the 43rd anniversary of the laving of the corner-stone of Swarthmore College by Prof. Edward Parrish, its first President. A number of friends and former students of Professor Parrish spent the morning at Swarthmore and repeated "the experiences of May, 10, 1866, when the Friends held a picnic to enjoy the natural beauties of the splendid site upon which Swarthmore College stands." Professor Parrish's son, Edward Parrish, a grandson and great-grandson were present. Dr. Joseph Swayne, President of Swarthmore, received the party and showed them through a number of the buildings. A few plants were collected and a picnic luncheon was held in the gymnasium of Swarthmore College. During the afternoon of the same day a memorial celebration was held in the Museum of the Philadelphia College of Pharmacy, when a portrait of Prof. Parrish was presented to the College. The assemblage was



Prof. Edward Parrish 1820-1872



a notable one and Mr. Isaac Clothier, Chairman of the Board of Managers of Swarthmore College, paid the following tribute to his memory: "Professor Parrish," he said, "had a wonderful amount of knowledge. All nature was open to him and everything they met in rambles in the open country appeared to be known to him. In the founding of Swarthmore College Professor Parrish was among the active workers, and he was recognized as a leader and an inspiration in all of the activities of the College. He travelled about the country and gave largely of his time to secure the funds for its establishment, and without him it would have been impossible to found this College." He was unanimously selected its first president, and Mr. Clothier stated that he well remembered his presence and the timely and wise words uttered by him at the laying of the cornerstone of the college building. In closing he said: "It is unusual forty years after, for one's friends to gather together and pay such a tribute to the memory of a man."

Professor Parrish died on September 9, 1872, at Fort Sill, Indian Territory. He had accepted an appointment by the Government to visit the Indian tribes located in the Indian Territory and while in the discharge of his duties fell a victim to the miasmatic fever then prevalent in that country. (A. J. P., 1872, p. 469.)

PROF. JOHN M. MAISCH.

Professor John Michael Maisch, the eighth Professor of Botany and Materia Medica in the Philadelphia College of Pharmacy, was among the influential men of his time. He was born in Hanau, Germany, on January 30, 1831, and died on September 10, 1893. His life and work seem almost too recent for me to attempt to write an extensive sketch of his career. In fact, the memoir of him by Mr. M. I. Wilbert, published in the American Journal of Pharmacy of August, 1903, is quite comprehensive and appreciative of him, containing as it does a complete list of his writings. It is for this reason that it seems unnecessary for me to attempt to enlarge on his work at this time.

Professor Maisch was an indefatigable worker, a voluminous reader and an extremely facile writer. He wrote nearly 300 original articles and was particularly known as the author of a text-book on "Organic Materia Medica," and as a collaborator with Dr. Stille on the National Dispensatory. His labors extended beyond the confines of the Philadelphia College of Pharmacy. He was very active

in the work of the Pennsylvania Pharmaceutical Association and the American Pharmaceutical Association. He was closely in touch with the representatives of all phases of pharmaceutical work and used his position as Secretary in these two Associations to advance the profession of pharmacy. By virtue of his professorship in the Philadelphia College of Pharmacy and his position as Editor of the American Journal of Pharmacy, he came in touch through correspondence with the leaders in pharmacy throughout the world. As showing the appreciation of his labors he was made an honorary or corresponding member of 43 Pharmaceutical and Scientific Societies in this country and abroad.

Professor Maisch was a tall man, well proportioned and of great strength. He possessed those traits of character which caused him to be looked upon as an authority and to win the reverence of all those who had the good fortune to study under him or become associated with him. He had a slight foreign accent, which in my judgment was rather pleasing, and he lectured with a simplicity and directness that characterizes a great teacher. His lectures were lucid and illustrated with an abundance of material that represented his own knowledge concerning drugs and their properties. To me personally he was an inspiring lecturer; my own career has been largely shaped by contact with him as a student and afterwards as a friend. He awakened in me a desire to pursue botanical and pharmacognostical work, and while I had expected to use my pharmacy course as a preliminary step towards securing a medical education, I abandoned this determination before graduating in pharmacy, and made up my mind to devote myself to botanical and pharmacognostical investigations, if it were possible for me to do so. After completing the courses of instruction under Professor Maisch, I came to know him quite well, receiving from him much encouragement and inspiration. I sat with him in his study at his home on very many occasions, discussing subjects of much interest to me. He was a man of strong personality and possessed a powerful mind that was a veritable store-house concerning men and their work. His book on "Organic Materia Medica" was the first book published in the United States on practical pharmacognosy. It was of very great value in the drug store and the laboratory and was the standard work on pharmacognosy for many years. As I go over the collections in the College scarcely a day passes that I am not reminded of him and his work for pharmacy and I am indeed grateful that I was a student under him.

Probably no eulogy of Professor Maisch surpasses the words of appreciation that were spoken by Mr. Charles Bullock, President of the Philadelphia College of Pharmacy at the time of his decease. He said: "There are occasions in the history of institutions, as well as in the domestic circle, when death spreads a dark mantle over our thoughts of temporal affairs and a heavy cloud obscures the future, while we look back upon the past illuminated by the remembrance of the life which has ceased after the work of the day has been accomplished. The Board of Trustees, his Associates in the Faculty, and you, my fellow-members, feel keenly the loss which we have sustained, yet with our sorrow should be mingled the remembrance that we have been partakers of the fruit of the labor of his life, benefits which will be a lasting memorial of his ability and devotion to the purposes and interests of this College. To few are given the various attainments possessed by Prof. Maisch. was devoted to the department of Science which he had chosen for his special work. As a teacher he was laborious and untiring in his endeavor to bring before his classes all important features pertaining to Materia Medica and Botany, and while an instructor, he was himself a diligent student during his whole life. His retentive memory was an encyclopedia of information, and rarely was he found to be wanting or incorrect in his information. As Editor of the Journal of the College for 22 years he discarded all matter not relevant to the true interests of the pharmaceutical science; while his ready discrimination enabled him to sift rapidly the literature of his profession. When occasion required criticism, it was done in the kindly spirit characteristic of a mind in pursuit of facts, and not for antagonism. The amount of labor which he performed as Author, Editor, Permanent Secretary of the American Pharmaceutical Association for a long course of years, attest the activity and ability of his well-balanced mind. His character in private life is well known to all of us, and requires no eulogy from me. It is not the purpose of your committee to sketch at this time a general outline of the life of our departed Associate; a suitable memoir will be prepared hereafter for publication in the JOURNAL of the College. A strong man has been taken from us; let us endeavor to honor the memory of Prof. Maisch by a renewal of our interest in this Institution to which he was devotedly attached, and seek to maintain the high character of the chair left vacant by his decease."

PROF. EDSON S. BASTIN.

Prof. Edson Sewell Bastin was a pioneer laboratory worker in microscopy. Some time during the early eighties he established the first botanical and microscopical laboratory in the Chicago College of Pharmacy and upon his acceptation of the chair of Botany and Materia Medica in the Philadelphia College of Pharmacy in 1893, he again organized a laboratory and insisted that microscopical instruction become a part of the regular curriculum of the students receiving their degrees in pharmacy. Professor Bastin was of a modest and retiring disposition and was personally comparatively little known. His influence, however, through his books was nation wide. His two books entitled "Elements of Botany" and "College Botany" were widely used, being employed as text-books not only in Pharmaceutical Schools but High Schools, Colleges and Universities. His work on "College Botany" was in use as a text-book at Columbia University when I was a student in 1891.

Professor Bastin was born in Ozaukee County, Wisconsin, on May 29, 1843, and died on April 6, 1897. An appreciative memoir of him was written by Professor Trimble in the American Journal of Pharmacy for August, 1897. Professor Trimble was very closely associated with Professor Bastin and encouraged him to publish his scientific researches on the histology of American medicinal plants. These two men collaborated in the publication of a posthumous work on the "North American Coniferae." This was a very important contribution to the inner morphology and constituents of quite a number of trees and shrubs of this family, showing something of their natural relationships and the origin of some of their constituents. These papers are frequently consulted by scientific workers and it is rather a happy incident that links the names of these two men of sterling character and love of science.

Professor Bastin did not publish very many articles before coming to Philadelphia. His noteworthy articles were published in "The Apothecary," a journal edited by Prof. Oscar Oldberg, of North Western University. The titles of these earlier papers have been given by Prof. Trimble in his memoir. In addition to the article on the Coniferæ, above referred to, he published the following list of articles in the American Journal of Pharmacy during the three years that he was connected with the Philadelphia College of Pharmacy:

Economic Botany, 1894, p. 283.

Starches in Different Commercial Varieties of Cacao, 1894, p. 69.

Structure of Podophyllum, 1894, p. 417.

Structure of Heuchera Americana, 1894, p. 467.

Structure of Geranium Maculatum, 1894, p. 516.

Structure of Asarum Canadense, 1894, p. 574.

Some Further Observations on the Structure of Sanguinaria Canadensis, 1895, p. 4.

Structure of Iris, 1895, p. 78.

Structure of Cimicifuga, 1895, p. 121.

Structure of Veratrum Viride, 1895, p. 196.

Structure of Epigaea Repens, 1895, p. 231.

Structure of Sassafras, 1895, p. 312.

Structure of Our Hemlock Barks, 1895, p. 356.

Structure of Our Cherry Barks, 1895, pp. 435 and 595.

Are They Roentgen Rays? 1896, p. 142.

An Instructive Floral Monstrosity, 1896, p. 430.

Professor Bastin was a self-educated botanist, and was interested in plants from his early youth. He had something of the natural instinct of a botanist in him and acquired a proficiency that was in some respects remarkable. He was very thorough and painstaking in his work. His word of caution to the student in his "College Botany" reads very much like the admonition of Agassiz, who said "Study nature, not books." Professor Bastin wrote: "Remember that the study of Botany is primarily the study of plants, and not the study of books about plants. If you study the book only, you will almost certainly find it dry and unprofitable, but if you use it as a guide to the study of plants, and study it plant in hand, verifying its descriptions by observations of your own, you will find the work not only profitable, but intensely interesting."

CONTINUATION OF ARTICLES.

Mr. Wilbert reminds me that there were several very practical pharmacognocists who antedated the work of any of those that I have mentioned. At some later date I am disposed to assemble my biographical studies of these men, and to include them in an article.

Prof. Lloyd has sent me a note in regard to Prof. Jackson with whose sketch I began this series of sketches. This is taken from an article by Prof. Lloyd, which is to appear in the *Eclectic Medical*

Journal for October, 1916. He says: "About the same date as the introduction of Compound Syrup of Hypophosphites, the talented Professor Jackson, of Philadelphia, deviser of 'Dr. Jackson's Cough Syrup' (a morphine compound, once very popular), theorized that a deficiency of bone substance could be overcome by artificial means, by feeding soluble calcium phosphate to people thus afflicted. Thus was introduced the Compound Syrup of the Phosphates, containing the 'phosphates of iron, lime, soda and potassa,' the chief among its ingredients being calcium phosphate. This pharmaceutical preparation appearing simultaneously with 'Churchill's Consumption Cure,' and being likewise colorless, and the term phosphate resembling phosphites, needed to be distinguished from the then popular Compound Syrup of Hypophosphites. To prevent the confusing of the two syrups, whose names were, to ignorant people, very similar, Mr. Gordon and others colored the Compound Syrup of the Phosphates red with cochineal, and strongly flavored it with spearmint. This was a very necessary precaution in those days, when remedies such as these were sold in large amounts over the counter to consumers. However, 'Jackson's Bone Food' did not become popular, for it did not prevent, or overcome, for example, a weakness in children leading to their becoming bow-legged. It was demonstrated conclusively, we take it, that artificially prepared phosphatic food did not parallel the life-involved phosphatic compounds found in vegetation. Long since passed away 'Jackson's Bone Food,' but 'Churchill's Consumption Cure' remains with us to-day."

THE PHARMACEUTICAL EXHIBITION IN PHILADELPHIA.

BY M. I. WILBERT, WASHINGTON, D. C.

The exhibition held by the Philadelphia College of Pharmacy, August 30th to September 30th, 1916, in connection with the 50th anniversary of the founding of the Alumni Association of that institution, might at the same time have been considered as an exhibition in celebration of the centenary of the introduction of systematic pharmaceutical training in this country.

It was on October 4, 1816, that the Board of Trustees of the University of Pennsylvania established a faculty of natural sciences. This faculty consisted of a Professor of Botany, a Professor of Natural History including Geology and Zoology, a Professor of

Mineralogy and Chemistry and a Professor of Comparative Anatomy. In connection with this course on the natural sciences, Dr. James Mease, better known as one of the historians of Philadelphia, was given permission by the Board of Trustees of the University of Pennsylvania to open a regular course of lectures on pharmacy in the University of Pennsylvania. In effect, therefore, the University of Pennsylvania offered to pharmaceutical students a very comprehensive course of study along the lines followed in Universities of Continental Europe, but one that is not duplicated, in this country, even at the present time.

Dr. Joseph Carson, in his history of the medical department of the University of Pennsylvania, does not outline very clearly the period during which the combined courses in the natural sciences and in pharmacy were conducted in that institution, but the records of the Board of Trustees show that Dr. Mease continued his lectures during the year 1816-1817 and that in the fall of 1817 he was again given permission by the Board of Trustees of the University of Pennsylvania to inaugurate the course of lectures on pharmacy in the University of Pennsylvania. A letter from James Mease, printed in Thacher's American New Dispensatory, Boston, 1821, would indicate that Mease was conducting his course of lectures on pharmacy in 1818 and it is quite probable that this course was continued up to and including the time of the proposed granting of the degree of Master of Pharmacy by the University in 1821. As is well known this action led to the organizaton of the Philadelphia College of Pharmacy and probably involved the discontinuance of the course of pharmacy at the University of Pennsylvania, though there is a record of the bestowal of the degree of Master of Pharmacy, in course, some years later.

The course in the natural sciences as organized in 1816 included such well known men as Dr. William P. C. Barton as Professor of Botany, Dr. Charles Caldwell as Professor of Natural History, Dr. James Cooper as Professor of Mineralogy and Chemistry, Dr. Thos. T. Hewson as Professor of Comparative Anatomy. All of these men are well known in that they took a very active part in the development of the sciences relating to medicine and the affiliated branches.

Among the more interesting features of the exhibition held in the Museum of the Philadelphia College of Pharmacy the most impressive was a reproduction of a typical Philadelphia drug store of a century ago. This shop was a reproduction of the store of Dr.

George Glentworth at Chester and Race Streets and included many curious historical relics. Contrasted with this shop of the long ago was a suggestion of a modern up-to-date pharmacy sufficiently equipped with the scientific laboratories required at the present time to coöperate with the medical profession in the modern practice of medicine. This modern pharmacy is equipped with a refrigerator safe for the keeping of biological products, a chemical laboratory for the systematic examination of chemicals and their preparations, a pharmacognostical laboratory for the examination of drugs, a bacteriological laboratory for the detection of bacterial contamination and the control of solutions and medicines, and a manufacturing laboratory for the production of galenical preparations and such other forms of medicines as can economically be produced in the present-day pharmacy. The dispensing room which is shown in connection with the show room contained a model five foot shelf of books that should be found in every up-to-date drug store.

Among the more interesting of the general exhibits there was shown for the first time a copy of the Pharmacopæia of the United States of America, Ninth Decennial Revision. The National Formulary, 4th edition, was also on exhibition. These two books, while they were decreed as being official from September 1, 1916, were generally unobtainable on that date. It is little wonder, therefore, that pharmacists who had the pleasure of being able to attend during the opening days of the exhibition almost invariably devoted more time to these new, but as yet rare, books than to any other portion of the show.

In connection with the exhibition of pharmacopæias, there was a complete set of the Pharmacopæias of the United States and a representative showing of the pharmacopæias of the several nations of the world. There was also on exhibition a complete set of the several editions of the United States Dispensatory and a considerable amount of material illustrating the methods employed and the character of the work done by the Committee of Revision of the United States Pharmacopæia VIII. In this connection there is shown a complete set of the earlier "Digest of Comments" on the Pharmacopæia; also a complete set of the present "Digest of Comments on the Pharmacopæia and the National Formulary." Attention was directed to the comprehensiveness of the latter publication by a sign which read: "Digest of Comments, originated by Charles Rice, has grown to be the greatest work of reference on the U.S.P. and N.F."

Drugs of all kinds, particularly botanical drugs, are much in evidence. A very large number of herbarium specimens and even growing plants were on exhibition. Among the growing plants there was a fairly large camphor tree; this was accompanied by a liberal sample of camphor presumably made in the United States. Illustrative of the uncommon chemicals made in this country at the present time there was a sample of atropine made from wild-growing stramonium by Eli Lilly and Company with the use of Lloyd's reagent.

Several firms showed biological products and an additional number exhibited pharmaceutical products that were biologically standardized. Considerable apparatus for the biological standardization of drugs was shown both by users and manufacturers of this apparatus and several novelties in this direction attracted considerable attention.

A complete set of the AMERICAN JOURNAL OF PHARMACY from 1825 to 1916, with an exhibition of portraits of the several editors and reproductions of the illustrations used in some of the articles, constituted an unusual and extremely interesting part of the general exhibit.

The interest that has more recently been taken in the cultivation of drugs was well evidenced by a collection of photographs of drugs and growing plants from the drug garden of the University of Minnesota, at Minneapolis. These photographs were placed on exhibition by Professor Newcomb and their comprehensiveness and mechanical excellence served to attract considerable attention.

Among the chemical exhibits, one by The Powers-Weightman-Rosengarten Co., included both crude materials and finished products. This exhibition from an educational point of view was exceptionally valuable. A collection of magnesia products by Keasbey and Mattison, of Ambler, Pennsylvania, was interesting in that it served to show the varied uses to which magnesia products are being put at the present time. Burroughs and Wellcome, two graduates of the Philadelphia College of Pharmacy, now in England, took an important part in the exhibition by the presentation of books, chemicals and pharmaceutical preparations.

The physiological standardization of galenical preparations was everywhere emphasized and the exhibition as a whole not alone served to call attention to the evolution of pharmacy during a century but also served to suggest the inevitable and possibly radical development of scientific pharmacy in the very near future.

SOME EXPERIENCES IN PREPARING EMULSION OF SILVER IODIDE.¹

By Josiah C. Peacock and Bertha L. DeG. Peacock.

The so-called emulsion of silver iodide is a suspension of this compound in some suitable vehicle. It is probably well known to some and a total stranger to many others.

This subject has been treated by Mr. M. I. Wilbert in the AMERICAN JOURNAL OF PHARMACY for February, 1906, and by Mr. J. K. Thum in the same journal for November, 1910, and November, 1915. Mr. Wilbert, where cited, mentions the availability of Irish moss, quince seed, salep and tragacanth as suspending media, and suggests a type-formula in which the silver iodide is first produced and then suspended in mucilage of Irish moss. Mr. Thum used the yolk of fresh eggs with ideal results, but brought about the formation of silver iodide in the presence of the volk, instead of first forming the silver iodide and then suspending it as suggested in Mr. Wilbert's formula. Mr. Thum described mucilage of Irish moss as being, next to the egg yolk, the most efficient and satisfying agent. Mr. Thum also used solutions of gelatin ranging in strength from 0.1 to 0.5 per cent., which after frequent shaking during twenty-four to thirty-six hours brought the silver iodide into suspension; the solution containing 0.3 per cent. gelatin is mentioned as giving almost perfect results.

But it was our good fortune to be ignorant of this specific information, when about two years ago a physician gave an order for some five per cent. silver iodide emulsion to be ready in half an hour. We knew how to make silver iodide, but we had never been called upon to suspend it, and our inexperience in the matter gave us no little concern as we reflected on the possibility of turning out a satisfactory product.

We knew that an "emulsion" of silver iodide is used for photographic plates, and that gelatin is employed in this connection as the emulsifying agent, but not in a manner fit for our needs. Running over the list of eligibles in our minds, we felt that any one of several mucilages recalled might be as well suited as gelatin, and some one among us in the store remembered having heard of mucilage of Irish moss being used for the purpose. Coincidentally we were thinning some mucilage of tragacanth for pasting labels, and grasping

¹ Read at the annual meeting of the Pennsylvania Pharmaceutical Association, June, 1916.

the opportunity we took advantage of its readiness, and in less than the allotted time had an emulsion of fine appearance in the physician's hands. He remarked that he would need more within a few days, so we immediately prepared another portion with the mucilage of tragacanth, both to be ready and also to learn how well it would keep. For comparison, another lot was made with the aid of mucilage of Irish moss. Within a few days the emulsion produced with tragacanth had begun to darken somewhat and showed a tendency to settle a coarse curdy precipitate, while that made with Irish moss retained its light yellow color and consistence for a much longer time. In fact, the color never perceptibly changed, although the silver iodide settled to some extent in the bottle.

Later, the physician reported that the lot which he received had retained its original appearance until used. But the use of Irish moss mucilage had, to our minds, improved the appearance and stability of the product so greatly that we decided to use it until an opportunity to look further into the matter of suitable suspending agents should come.

Accordingly, we examined mucilages made from sassafras pith, flaxseed, salep, elm, quince, dextrin, starch, and acacia, all of which are well known in use as emulsifying agents and emollient vehicles. We also repeated our experiments with tragacanth and Irish moss, and at the same time tried solutions of gelatin and egg albumen. Yolk of egg was not tried during this period, for it was looked upon as of itself too readily changeable.

After our experiments had been made and our conclusions drawn, we were apprised of the articles written by Mr. Wilbert and Mr. Thum. We have said it was our good fortune to be ignorant of the specific information given by these gentlemen; now the reason for so saying is not that we do not appreciate their work nor declare for their priority on all points in common, but had we known of their publications we most likely would not have made the many experiments performed for the purpose of this paper, and thereby would have been deprived of such knowledge as we have gained through personal experience with this subject. However, we present our experiences because they not only essentially conform to and thus confirm the statements of these gentlemen, but also mention some matters of interest not touched upon in their contributions.

Our object in making these experiments was to devise a plan to quickly produce a finely divided suspension of silver iodide and do so by introducing as little suspending material as possible.

Silver iodide is affected by light, especially the actinic rays, when concentrated by a lens, but it is not so rapidly affected by diffused daylight or artificial light that it shows perceptible change in the time required to make an emulsion, and for that reason none of these processes need to be conducted in a dark room. Indeed, silver iodide has proven to be so permanent in these emulsions that we look upon the theory of its use as an antiseptic as somewhat of a conjecture of fact and fancy, to be settled by each practitioner for himself.

Unless otherwise specified our experiments were made on the basis of five per cent. silver iodide. Where a recognized formula for a mucilage existed, the prescribed strength and mode of preparation was followed, and the product used in the first trials with each individual mucilage.

The amounts of silver nitrate and potassium iodide needed to give the required quantity of silver iodide were calculated from the terms of the following well-known reaction:

$$AgNO_3 + KI = AgI + KNO_3$$

168.69 164.76 233.02 100.43

the symbols of which, designated in molecular weights, as shown under them, respectively, indicate that 168.69 parts of silver nitrate require 164.76 parts of potassium iodide to produce 233.02 parts of silver iodide with the simultaneous formation of 100.43 parts of potassium nitrate.

In the course of this paper it will be pointed out that the specific gravity of mucilage of Irish moss, no matter how long macerated when prepared, is but negligibly more than water, therefore in our calculations for a five per cent. suspension we used 456 grains, or the weight of a fluidounce of water, as the 95 per cent. of vehicle per fluidounce, which calls for twenty-four grains of silver iodide as the five per cent. sought. By ratio, we find that 17.375 grains of silver nitrate are required to yield this silver iodide. A close scrutiny of the figures involved in the chemical reaction reveals the fact that just a little more of silver nitrate is required than of potassium iodide for accurate and complete interchange with each other.

Now the United States Pharmacopæia requires silver nitrate to be practically pure, so no allowance need be made on its part for impurities. But the same authority permits potassium iodide to contain one per cent. of impurities, consisting chiefly of chloride, carbonate and free hydrate, hence some allowance must be made for their most probable presence; and to commensurate for any deficiency of actual iodide, it has been suggested to use a slight increase over the theoretical amount of potassium iodide, and make the quantities of the two chemicals equal. This was invariably done by us, after we had learned by experience that as little as one-fortieth of a grain of unaffected silver nitrate which might remain in solution would very rapidly bring about discoloration of Irish moss mucilage.

There can be but little, if any, objection found to the presence of a minute excess of potassium iodide over that actually required, as it is imperative to completely precipitate the silver so that no soluble salt of it remains in solution, to act either as an undesirable application or as a factor to discolor the emulsion.

For quantities greater than one ounce of five per cent. emulsion, simply multiply 17.375 grains by the number of ounces required.

Silver iodide can, of course, be precipitated, washed, and then suspended in a mucilage, although it requires longer time to get it finely divided by agitation or stirring, and for this reason the plan is not so well suited for hurried calls.

The products of our numerous attempts with this plan were not nearly so uniformly satisfactory as when the silver and potassium salts were dissolved each in one or two fluidrachms of distilled water and each solution diluted with a mucilage to half an ounce before mixing to form the insoluble silver iodide. In other words, the smoothness of the suspension was almost always superior when the reaction was brought about in the presence of a suitable mucilage, and if there is any chemical activity in the preparation, or if it is used solely as a protective application, it must be granted that the more finely divided the silver iodide the greater its efficiency.

When the precipitated silver iodide is not washed before suspending it, the emulsion will, of course, contain the potassium nitrate produced in the reaction, as also any excess of potassium iodide and other soluble salts originally present in the potassium iodide.

The amount of potassium nitrate formed in the preparation of a five per cent. emulsion is 10.34 grains per fluidounce, which equals a 2.27 percentage strength, which is three to four times the strength of the usual physiological or normal salt solutions. When intended for use in the eye, it may be thought necessary to rid the emulsion of soluble salts, although this may not be necessary in all cases, espe-

cially when we recall that ten to fifteen grains of borax or other salts are not infrequent ingredients in a fluidounce of eye drops. As a genito-urinary application the presence of these potassium salts is probably of little moment.

But if, for any reason, the emulsion must be free from soluble salts, the silver iodide may be produced from the water solutions of the necessary substances, thoroughly washed with either hot or cold water by decantation, and then incorporated in the suspending medium. Mucilage of Irish moss will serve here either hot or cold. Experience demonstrates that silver iodide settles very rapidly in hot water, and the expectation here would be to see the same thing happen; on the contrary, however, the hot mucilage envelops the silver iodide and overcomes this tendency to settle. Or, as we have found to be thoroughly practical when mucilage of Irish moss was employed, the emulsion may first be prepared by precipitating the silver iodide in the presence of the mucilage and the product then subjected to dialysis, using the ordinary parchment powder papers of the store as the necessary septum.

The former plan, for some reason which we have been unable to discern, unless it be attributed to allotropic conditions of the silver iodide, does not always show as smooth suspensions as would be desired; while the process of dialysis has almost always shown an improvement in this appearance, and has proven a simple expedient in ridding the emulsion of all crystalline matter.

Should it be deemed necessary to sterilize the emulsion either with the salts present or removed, it will be found that the preparation made with Irish moss will withstand this process. A sample subjected to streaming steam for three successive periods of twenty minutes each showed no change except a tendency to thicken slightly on the top surface, and was readily restored by shaking.

When silver nitrate was added to the several mucilages examined some of them showed a tendency to gelatinize, but none of them showed any appreciable precipitate of chlorides, so none were disqualified for such a cause.

Mucilage of sassafras pith, U. S. P., two per cent., failed to suspend the silver iodide, as did also a ten per cent. strength of mucilage. Both products showed stringy coagulations and curds and upon standing and shaking did not improve in miscibility.

Mucilage of flaxseed, twenty per cent., did not serve the purpose nor did one of 100 per cent. strength. The silver iodide went down

in veritable lumps which were difficult and sometimes impossible to shake through the liquid.

Mucilage of salep, N. F., one per cent., did not satisfactorily suspend either three or five per cent. of silver iodide, and failed to preserve it; while a five per cent. salep mucilage suspended three per cent. of silver iodide moderately well, but very soon showed a change in color.

Mucilage of elm, U. S. P., six per cent., was not a satisfactory suspending medium by any means; neither was a twenty per cent. strength. This mucilage behaved very much like mucilage of sassafras pith.

Mucilage of quince, N. F., Appendix, of two per cent, strength. and even one of double strength, did not suspend either three or five per cent. of silver iodide. The ten per cent. mucilage vielded variable results, since in some instances it failed outright and discolored. while in others it gave quite satisfactory effects; and one of the most presentable three per cent, emulsions obtained from any experiment we made was afforded by a twenty per cent. mucilage of quince after twelve hours, almost without shaking, although when first made it was a hopeless looking mess of feathery precipitate. We have never been able exactly to duplicate this particular result, which emphasizes the uncertainty of quince mucilage. In the weaker strengths, when the mixtures did not approximate suspension, discoloration was soon observed. When silver nitrate is added to quince mucilage it coagulates it to an almost jelly consistence which requires long stirring to render it sufficiently thin to enable one to proceed with the work. It will therefore be recognized that quince mucilage is very poorly adapted to the purpose.

Mucilage of dextrin, N. F., thirty-three and one-half per cent., suspended the silver iodide, but decomposition began to show almost immediately.

Mucilage of starch, B. P., was prepared by thoroughly cooking starch with boiling water in the proportion of twelve grains to the fluidounce. In this strength of starch mucilage the silver iodide mixed, but quickly settled, leaving a perfectly clear supernatant liquid of about one-third to one-half of the volume. This preparation had the distinction of being the only one from which the emulsified part separated to leave a clear liquid. A mucilage of twenty-four grains to the fluidounce behaved similarly.

Starch showed but very little tendency to discolor, and seems to

be suitable so far as appearance of emulsion is concerned, although on several occasions samples of it became mouldy and displayed a musty odor within a week.

Mucilage of acacia, made according to the U. S. P. formula of thirty-four per cent. with thirty-three per cent. of lime water, had a slight acid or nearly neutral reaction. An alkaline mucilage must, of course, be avoided. The slightly acid mucilage of acacia gave good results, as did also a mucilage of the same strength made without lime water and possessing a strong acid reaction to litmus.

Half strength and quarter strength mucilage of acacia also showed good effects. These mucilages contain so much more solids than Irish moss mucilage, however, that they cannot be recommended in its stead.

Mucilage of tragacanth, U. S. P., six per cent., made with or without glycerin, was entirely too viscid, but reduced to one-quarter strength with water it suspended the silver iodide quite satisfactorily, but upon standing for a week or more showed in some samples an inclination to granulate, although some products containing it stood for months without showing much change in color. It can well be considered fit for any emulsions intended for prompt use, although it cannot be prepared as quickly as mucilage of Irish moss and for this reason is not so desirable.

Solutions of gelatin were tested as emulsifying agents only to find that concentrated ones were impractical to use in the presence of silver nitrate because it coagulated the gelatin so intensely; and that solutions which are diluted sufficiently to permit the addition of silver nitrate have very little immediate suspending action on it. For these reasons gelatin was discarded.

Egg albumen in full strength was coagulated so firmly by silver nitrate that it was rejected. Diluted with an equal volume of water it could be put through the process, but the result was a very curdy precipitate and so far from being satisfactory as scarcely to deserve mention along with Irish moss, tragacanth, acacia and starch.

In our original experiments little attention was intended to be given suspending media of animal origin, for the reason that they would putrefy. But after reading Mr. Thum's notes on this subject we decided to repeat our tests with gelatin and egg albumen, and also to try yolk of egg. As reported by Mr. Thum, we also found yolk of egg to be a very efficient and prompt suspending material, but the emulsion began to show a change in color in less than a week.

f

e

Compared with the preparation from Irish moss, it cannot be considered in any way superior.

From the foregoing statements it will be observed that some of the mucilages which have been treated of satisfactorily suspend silver iodide but discolor so rapidly as to be impractical, while others among them did not suspend it at all, even when tried in much greater strength than the recognized formula for that particular mucilage.

We have now reached mucilage of Irish moss, N. F., three per cent. It is undoubtedly the best practical emulsifying agent of all examined for the purpose, as every trial and test of it has proven. Its dependability and stability will unquestionably gain for it the commendation of all who try it for this purpose.

But before proceeding to tell the results of the experiments with the mucilage and silver iodide, mention should be made of some of the properties of Irish moss itself which were observed during these experiments. When dried it loses but a trifle in weight, indicating an almost total absence of moisture in its make-up.

The sample we examined and used for these experiments showed a loss of approximately ten per cent. of weight through the washing required to remove all but a faint trace of chlorine; the chlorine so removed represented in terms of sodium chloride six per cent. of the original substance. The water-insoluble substances present in the sample of moss amounted to ten per cent., which indicated a total of eighty per cent. of available water-soluble matter for mucilage.

As hereinbefore stated, it is a remarkable fact that a fluidounce of mucilage of Irish moss made according to the N. F. directions weighs but two and a half to three grains more than a fluidounce of water, making the increase in specific gravity over water practically negligible in all calculations, as it affects but the third decimal place. This fact remains the same whether the mucilage is prepared with hot or cold water. A fluidounce of the mucilage was evaporated in a platinum crucible in order to check up this paradox; the residue weighed less than three grains.

Mucilage of Irish moss is practically neutral to litmus paper, for it shows but the faintest acidity, and a very minute amount of fixed alkali will render several ounces of the mucilage alkaline to litmus and phenolphthalein.

Mucilage prepared by macerating Irish moss in cold water serves in every respect as well as the mucilage prepared with hot water and allowed to cool. A series of mucilages were made by maceration in cold water for periods of fifteen minutes, thirty minutes, one hour and three hours, respectively, with the result that a fluidounce of the thirty minutes, one hour and three hour samples were on an average within a grain of each other in weight, while the fifteen minute sample was within half a grain of the weight of the thirty minute specimen, demonstrating that thirty minutes maceration with cold water will produce a satisfactory mucilage.

After a number of tests made with the mucilage prepared in strict accordance with the N. F. directions, we finally devised the following plan, basing it on the results of our experiments:

Rejecting brown and harsher portions of the moss, select a few well-bleached and finely curled pieces to obtain the weight required; place these in a graduate and wash with several changes of water; as the texture softens, spread the branches to insure thorough washing; six to eight changes of water within two to three minutes will be found to be sufficient to remove the adhering chlorides. By this time the moss begins to swell and display a gelatinous surface and a test of the washings made now will show but a faint indication of chlorides. There need be no fear of overdoing the washing and thus losing mucilage, for as has been pointed out there will be an abundance of mucilage left to saturate the water. The moss is now macerated in a fresh portion of cold water with frequent stirring for half an hour, then expressed through well-washed muslin used double thick to obtain a clean mucilage. For each fluidounce of five per cent, emulsion to be made, 17.375 grains of silver nitrate are to be dissolved in one fluidrachm of water and this solution mixed with three fluidrachms of mucilage of Irish moss. The same amount of potassium iodide should be dissolved in one fluidrachm of water, and its solution diluted to four fluidrachms with mucilage. The two solutions are now to be mixed by stirring together in order to thoroughly break up any curds of the silver iodide and facilitate suspension. The product may now be transferred to suitable containers.

In carrying out this process, it will be noted that the addition of silver nitrate to mucilage of Irish moss shows but little opalescence; but the silver nitrate causes the mucilage to thicken almost to the point of gelatinization, although it can be stirred into a uniform consistence. On the other hand, the effect of the potassium iodide was to lessen the viscidity of the mucilage of Irish moss.

The entire quantities of the solutions may be mixed at once, or

one may be gradually poured or dropped into the other with constant stirring; there appears to be but little difference in behavior, unless it be that, when the entireties are mixed, more time is required to shake or stir into a uniformity of appearance. It seems not to matter which solution is poured into the other, for although silver iodide will dissolve in concentrated solutions of potassium iodide, the solution here employed is entirely too weak even in the beginning and of course is becoming weaker and weaker as the reaction progresses. The emulsions prepared with mucilage of Irish moss present at the time of reaction have seldom, if ever, failed to be smooth and uniform. We have never had a sample prepared in this manner darken or display any decided change in color, but we have had several samples made by first precipitating the silver iodide, washing, and then suspending, begin to darken within a few days.

Emulsions made with Irish moss may be diluted with water or with moss mucilage to make weaker preparations. Dilutions made with water settle more rapidly than those made with mucilage—a natural inference. Suspensions in Irish moss never settled entirely clear, as did starch emulsions. When the precipitate does settle in moss mucilage it appears to be still enveloped by the viscidity of the vehicle and may be easily restored by shaking. A sample prepared last August demonstrates this condition very effectively. It is also possible to make a ten per cent. emulsion with moss mucilage, a sample of which, prepared a few months ago, is here shown (at Association meeting).

Owing to the heavy nature of silver iodide, it is evident that no emulsion should be used without shaking. In all of our experiments flint glass vessels and containers were used, and found to be thoroughly practical, and prolonged contact with cork stoppers has not in the least affected any of the emulsions which were satisfactory when first made, circumstances which compel us to believe that when once formed and protected with mucilage, silver iodide is quite a stable substance; in fact a sample exposed to bright direct sunlight for two days darkened but little, while a specimen unmixed with mucilage of Irish moss had turned drak gray within an hour under the same influence.

Failing in an attempt to filter an emulsion made with Irish moss, it occurred to us to dialyze it as a means of removing the salts in solution, and as a septum we used ordinary parchment powder papers. It required about twenty-four hours and five or six changes

of water to extract practically all of the soluble salts. The emulsion was improved in appearance and consistence, through the removal of the crystalline constituents. A comparison was made by allowing a few drops of the original emulsion to spontaneously evaporate upon a smooth glass surface, with the result that the salts in solution were left as a crystalline centre in the residue, while a like performance with an emulsion from which the salts had been dialyzed showed no such crystalline residue, but instead a surface and appearance almost as smooth as a photographic plate.

The potassium nitrate left in the emulsion prevents the mucilage from decomposing, at least so far as odor is evidence. A sample prepared in August, 1915, gives no indication through odor of any change, whereas mucilage of Irish moss alone will within a week to ten days become obnoxious. Likewise, an emulsion from which the salts had been dialyzed developed an odor of putrefaction within a

couple of weeks.

While it is evident that emulsion of silver iodide prepared by the method outlined will keep indefinitely, still if there is but an occasional call for it, and no need of keeping it ready made, the plans here and elsewhere given furnish a quick and thoroughly practical method for its production. But no matter which vehicle is used the facility with which silver salts are reduced by certain agents must be remembered so that all utensils used will be scrupulously free from such disturbing causes, for aside from these there is little chance of failure.

Upon comparing mucilage of Irish moss with the other available vehicles, its advantage over tragacanth will be seen to lie in the ease of preparation; while its preference over starch and acacia comes through it introducing so little substance into the preparation.

The advantages of mucilage of Irish moss may then be emphasized as follows:

It can be depended upon as an efficient suspending agent.

It is easily and quickly prepared.

It gives a permanent emulsion.

It supplies a sufficiently viscid medium though adding but a trifle of solid matter.

It is as inert as any other suitable substance.

It is inexpensive.

While yet concerned with this subject a few words will be said regarding the sulphur which is present in Irish moss. To one who

had never incinerated a vegetable drug and found a mass of hepar sulphuris as the resulting ash, it was a revelation to encounter such when some unwashed Irish moss was subjected to a bright red heat. With a lower heat very little sulphide is formed, but raised to bright redness, one can see a phosphorescence as of free sulphur burning, although sulphur dioxide could not be detected by odor. The fused mass amounted to 21.25 per cent. of the original weight. Chlorides were present, of course.

Sulphates, earthy phosphates, carbonates, iron, aluminum, and silica were other constituents encountered in the examination of this ash, but no complete analysis was attempted.

A second weighed portion of moss was washed until it began to gelatinize, then dried and ignited. The result showed ten per cent. of ash, and contained abundant alkaline sulphides, and a little chlorides.

A third weighed portion was completely exhausted by repeated applications of boiling water, the residue was dried and weighed. This insoluble part represented ten per cent. of the original substance. It was next incinerated and found to yield 2.5 per cent of ash, calculated on original moss. The ash from this treatment was snowwhite; it contained neither chlorides nor sulphides, but consisted of silicious matter. It is worthy of remark that in whatever form the sulphur exists in Irish moss, it has arranged itself in a very accommodating manner, so far as our present use for the mucilage is concerned.

AMERICAN PHARMACEUTICAL ASSOCIATION.

THE ATLANTIC CITY MEETING, SEPTEMBER 5-9, 1916.

BY PROF. EDWIN L. NEWCOMB.

The sixty-fourth annual convention of the American Pharmaceutical Association was called to order by the President, Dr. William C. Alpers, at 11.20 o'clock, Tuesday morning, September 5, on the Steel Pier at Atlantic City. The Local Secretary, Mr. Charles Holzhauer, formally greeted the five hundred visiting delegates who were seated in the auditorium and explained the numerous entertainment features which had been provided for the occasion. The excellent facilities for the holding of the general sessions and section meetings were pointed out and the hope expressed that all would profit from the meeting.

President Alpers requested Vice-president LaWall to take the chair while he presented his annual address. President Alpers called attention to the fact that the Association now had twenty branches distributed throughout the United States and that one branch had recently been organized at Havana, Cuba. The availability of the Fairchild scholarship and the provisions which all competing candidates must meet were referred to. In educational matters President Alpers made a strong plea for high school graduation as an entrance requirement to all colleges of pharmacy. The president stated that the educational work which the Association was carrying on was of the utmost importance, and that more publicity should be given to this phase of Association activity. A warning was issued that unless laws are enacted raising the educational qualifications for candidates for pharmacy in different states, states will establish pharmacy courses in their technical high schools, as already has been done in Detroit. The president referred to the Detroit experiment as a dangerous situation. The National Formulary, business methods, finances, and the A. Ph. A. Journal were all discussed at length. Many criticisms of the present methods and policies of the A. Ph. A. were made.

At the close of the address, Vice-president LaWall appointed the following committee on president's address: James H. Beal, chairman, M. I. Wilbert, S. C. Henry, L. C. Hopp, and R. A. Lyman, with instructions to report upon the president's address with recommendations at a later session. Following President Alper's address. Dr. Solomon Solis Cohen, Professor of Materia Medica of the Jefferson Medical College, Philadelphia, and a member of the Committee of Revision of the Pharmacopæia, addressed the convention on the revision of drug standards and educational requirements for pharmacists. Dr. Cohen stated that from a medical viewpoint pharmacy, as reflected by the new federal standards, was keeping pace with the other professions. Unfortunately, however, the educational standards of pharmacy had not been advanced in keeping with the progress which had been made in the improvement of pharmaceuticals. He emphasized strongly the importance of a broad educational foundation for the study of pharmacy. He stated that, in his opinion, a high school training was about the proper preliminary educational qualification which a pharmacist should have. He criticized the pharmacist who makes the compounding of prescriptions a side issue.

Immediately after the address by Dr. Cohen Secretary W. B. Day called the roll of states, territories and provinces represented. A recess of ten minutes was then taken in order to allow time for the organization of the nominating committee. The nominating committee met immediately and nominated the following members of the Association to be voted upon by mail during the coming year: President, C. O. Bigelow, C. Holzhauer, H. P. Hynson; vicepresident, F. R. Eldred, A. R. L. Dohme, Francis Hemm; second vice-president, L. E. Seltzer, J. C. Wallace, F. P. Haymaker, Philip Asher; third vice-president, Theodore Bradley, Louis Saalbach, G. C. Blakeslee; for members of council, F. J. Wulling, C. B. Jordan, M. I. Wilbert, Otto F. Claus, G. M. Beringer, Albert Bolenbaugh, J. P. Alacan, Thomas F. Main and L. D. Havenhill. At a later session the nominating committee reported that Mr. Bigelow and Mr. Hynson could not be induced to accept the nomination. The following were, therefore, duly nominated for the presidency in their stead: William L. Cliffe and H. C. Christensen.

SECTION MEETINGS WELL ATTENDED.

All of the section meetings throughout the convention were well attended and the discussions were spirited and lengthy. The number of new resolutions adopted was not as great as at some former meetings, but there was every indication that the membership was coming more and more to be in unison on certain fundamental matters which have been discussed for many years.

The proposition to have the Carnegie Foundation investigate the pharmaceutical colleges of the country was discussed in a paper before the Section on Education and Legislation. The failure of the Carnegie Foundation to carry on the work induced the author to suggest that the Association should undertake this work at an early date.

Before this same section a number of papers were presented on narcotic legislation and the consensus of opinion seemed to be that the Harrison Law should be amended so that the recent ruling of the United States Supreme Court that the possession of narcotics by laymen is not evidence of violation of the law would be nullified. Nearly all were of the opinion that the Supreme Court ruling had made the Harrison Law of little value. B. L. Murray, of New York, chairman of the committee on the regulation of the transportation of drugs by mail, presented a valuable report and recom-

mended the approval of a bill now pending in Congress, relieving this situation. The report was well received and would have been unanimously adopted had it not been for the fact that the present form of the bill would prohibit the use of the mails for the transportation of goods containing alcohol, or goods of which alcohol forms a part. Likewise, morphine and its derivatives could not be mailed if the bill passed in its present form.

INCOMPETENT CLERKS.

B. E. Pritchard, of New York, in speaking before the Legislative Section, said: "There are too many stores and too few competent drug clerks." The remedy suggested was that there should be more encouragement given to young men to enter the profession. A good academic education should be required before a candidate is accepted in college. The speaker stated that he had discovered that clerks had come to him who upon examination confessed that they did not understand the language used by the instructors, and that they were deficient wofully in the knowledge of English owing to their limited vocabulary.

A recommendation was adopted calling upon the Treasury Department to give due consideration to an increase of pay to pharmacists in the public health service of the United States. It was pointed out that there had been no salary advances in this particular department for fourteen years.

Professor H. V. Arny, of New York, in presenting his report on weights and measures, called attention to the unusual opportunity at the present time for the extension of our trade in foreign lands. He said that it was necessary that the metric system of weights and measures be adopted at once by manufacturers and wholesalers if anything is to be gained by the present opportunity. The use of the metric system is absolutely essential in handling the South American trade.

PROPRIETARY MEDICINES DEFINED.

Dr. James H. Beal presented the report of the joint committee, representing the N.A.B.P. and the A.Ph.A., concerning the definition for proprietary medicines. The definition which the committee decided upon was the one adopted by the Section on Education and Legislation at the San Francisco meeting last year, reading as follows: A proprietary preparation is any medicine, drug, chemical,

or preparation, simple or compound, intended for the cure or prevention of diseases, for man or animal, which is protected by patent or secret formula. The report of the committee was adopted.

The report of the committee on proprietary medicines was of unusual interest in that it gave the results of conferences with proprietary medicine manufacturers of the United States held during the year. The Proprietary Association, it was stated, had adopted practically all of the recommendations concerning proprietary medicines which were approved at the California meeting of the A.Ph.A. The spirit of co-operation which was indicated by the report was highly pleasing to the members of the A.Ph.A., and it was felt that it would go a long way toward the elimination of alcohol and habitforming drugs when used in patent medicines. Furthermore, it would have a most beneficial effect in the effort to have eliminated statements from patent medicine literature which was deceptive and which in some cases promise cures for recognized incurable diseases. The report received from the Proprietary Association indicated that that organization was as anxious as the A.Ph.A. to eliminate from the proprietary medicine business all features which were in any way detrimental to the public. The publication of formulas of proprietary medicines was discussed briefly and attention was called to the fact that the purchasing public paid very little attention to published formulas. The general consensus of opinion seemed to be to the effect that the publication of formulas would not directly improve conditions.

Many other papers of interest and value were presented before the Section on Education and Legislation. At the closing session of this section, the nominating committee reported the following nominations, who were duly elected to serve for the ensuing year: Chairman, Prof. R. A. Kuever, Iowa City; secretary, C. B. Jordan, Lafayette; associates, A. W. Linton, Seattle; Dr. H. V. Arny, New York; and John Culley, Ogden.

OFFICERS' REPORTS.

At the second general session reports of the chairman and secretary of the council and also of the secretary and treasurer of the Association were received. High tribute was paid to Professor E. G. Eberle, now of Philadelphia, formerly of Texas and editor of the A.Ph.A. Journal. Professor Eberle was tendered a vote of appreciation by the council and heartily applauded by the general

session. The report of Treasurer Whelpley showed a cash balance of \$14,000 and trust funds of over \$40,000.

Resolutions were adopted directing a vote of thanks to be sent to Sergeant-General Gorgas and Secretary of the Navy Daniels in appreciation of what they have done for pharmacists in their respective branches of the government.

Secretary Day's report was chiefly statistical and showed that a large amount of the membership work of the Association was being carried on by the general secretary.

PROCTER MONUMENT FUND.

Dr. John F. Hancock, of Baltimore, chairman of the William Procter, Jr., Monument committee, presented a report which showed that the increased expenses caused by the necessity for making changes in the design of the monument to meet the approval of the District of Columbia Art Commission were such that the total cost would amount to \$8500. The committee now has on hand \$1778.15, and nearly \$1000 must yet be collected. The bill in Congress, providing a site for the monument and making an appropriation of \$2000 for the base, has not thus far been acted upon.

SCIENTIFIC SECTION.

Upwards of forty papers were presented before the Scientific Section, many of which were illustrated by demonstrations consisting of charts, chemical reactions, displays, exhibits and lantern slides. The efforts of the officers of the section to provide facilities for the demonstration of papers were well repaid and the hope expressed that even better facilities for such purposes might be provided for future meetings.

The paper by Professor J. U. Lloyd on "Adsorption," which was fully illustrated by experiments, was highly appreciated by all in attendance. At the closing session of the section, Professor Lloyd was awarded the Ebert Prize for having presented the best

paper at the San Francisco meeting.

Dr. H. C. Wood, of Philadelphia, presented a carefully prepared paper on the sum of the results of the Harrison Anti-Narcotic Law. Dr. Wood condemned the readiness with which many physicians resort to the use of narcotics to alleviate pain. Dr. Wood further urged the absolute elimination of narcotics, even in minimum amounts, from all preparations of a proprietary nature. The speaker

stated that in his opinion the frequent use of infinitesimal amounts of narcotics was sufficient to produce a habitue. Dr. Wood emphasized the need for caring for narcomania patients, stating that the use of narcotics was a disease and that such patients should not be considered as criminal and then left bereft of any help to meet the conditions imposed. Dr. Wood estimated that there are from one hundred to two hundred thousand victims of the drug habit in the country at the present time. The speaker stated that the number is much less than the total that existed before the enforcement of the Harrison Law. The speaker felt that the solution of the problem of narcotism was to be found in educating the general public to the danger of habit-forming drugs. The consensus of opinion among pharmacists appeared to be, however, that more stringent legislation was needed.

MEDICINAL PLANT CULTIVATION.

W. W. Stockberger, physiologist in charge of drug-plant and poisonous-plant investigations, Bureau of Plant Industry, United States Department of Agriculture, gave an instructive paper illustrated by lantern slides and dealing with the progress which has been made during the past year in drug-plant culture. Dr. Stockberger urged conservatism among those who contemplate going into the commercial production of vegetable drugs. The development of medicinal plant gardens by colleges of pharmacy had the hearty approval of the speaker, who said: "The establishment and proper support of a medicinal plant garden of the pedagogic type as an adjunct to a college of pharmacy or the course in pharmacognosy of a university should be of direct and practical benefit to the students, to the university itself, and finally to the people as a whole."

The large number of other papers presented were nearly all of direct interest to pharmacists. A brief report such as this, however, cannot include abstracts of the papers and do justice to them. The occasion is here taken to point out to retail pharmacists the exceptional value of membership in the A.Ph.A., which includes subscription to the journal of the Association in which the papers presented at the annual conventions are usually published. At the closing session of the Scientific Section, the following officers for the ensuing year were elected: J. L. Turner, Brooklyn, chairman; B. L. Murray, New York, vice-president; and A. W. Linton, Seattle, secretary.

SECTION ON PRACTICAL PHARMACY AND DISPENSING.

Chairman Joseph Weinstein called the first session to order on Wednesday at 2 P.M. The address of the chairman placed emphasis upon the value of clinical examinations by pharmacists as a means of widening the scope of practical pharmacy. Many examples were given to illustrate how the pharmacist could add both to his profits and professional standing by making clinical examinations of urine, sputa, blood tests, etc., for physicians. The address was liberally discussed, during which it was pointed out that work of this kind should bring professional fees which should be paid by the patient as a rule.

J. L. Lascoff presented a paper on uniformity in dispensing and exhibited photographs to show the wide variation in the size of pills compounded in different stores on the same prescription. The paper was of exceptional value to the practising pharmacist, and it was voted that it be referred to the council with the recommendation that it be published in an early issue of the Journal.

Propaganda to have for its purpose more instruction to medical students on the writing of prescriptions for the U.S.P. and N.F. preparations was urged by Dr. Diner, dean of the College of Phar-

macy, Fordham University.

M. I. Wilbert, of Washington, presented some valuable suggestions on the scope and possible uses of the proposed A.Ph.A. recipe book. It was the general opinion that the book should contain formulas for cosmetics, toilet articles, household preparations, and similar articles for which the druggist should have a reliable recipe. It was voted to recommend early publication in the JOURNAL of an index of all previously published recipes.

J. S. Levy, of New York, presented a paper entitled: "At Last a Safe Bichloride Tablet." The paper was illustrated by specimens of the new form of tablet which was unusual in shape, being long and slender and containing a small amount of oil of mustard. It was stated that before a person could swallow the tablet he would have his attention arrested by a gustatory shock due to the oil of mustard compounded in the tablet for that very purpose. The length of the tablet, it was stated, was such that it would require considerable time to swallow it in its entirety, and its unusual design was such that it would be virtually impossible for the tablet to be mistaken for some other medicine.

The papers presented before the Section on Practical Pharmacy and Dispensing were unusually well received and, no doubt, will in time be published in various pharmaceutical journals throughout the United States.

SECTION ON COMMERCIAL INTERESTS.

The Section on Commercial Interests held two sessions which by some were considered to be the most interesting of the convention. The effect of the war upon the commercial side of pharmacy and chemistry was dwelt upon at length by R. S. Lehmann, of New York.

The chief feature of the program of this section was the address on "Advertising," by J. Thomas Lyons, of the Baltimore News, Mr. Lyons took up the subject of drug store advertising from the point of view of a layman interested in advertising. He suggested that the appearance of the outside of the store was just as important as the appearance of the interior, and stated that a good coat of paint would be a good investment for many a drug store. He advocated competition in service and in quality rather than competition in prices, and urged all the members to get behind the Stephens price maintenance bill. He finished his address with an earnest plea for co-operation among the retailers.

Several of the papers presented were accompanied by demonstrations of practical methods to use in advertising. At the second session Homer S. Pace delivered a lecture on "Business Education for Pharmacists." This paper brought forth an unusual amount of discussion, during which it was evidenced that the pharmacists of the country differed in opinion as to how much commercial instruction should be given in a college of pharmacy.

Practically all, however, felt that business instruction of some kind should be obtained by the pharmacy student: The percentage of business instruction in proportion to the purely pharmaceutical instruction which the student should acquire may possibly to some extent depend upon the individuality of the student.

SECTION ON HISTORICAL PHARMACY.

The Section on Historical Pharmacy held one session on Friday morning at which time some twenty papers were received, many of which were read in full. The special feature of this session was the presentation to the A.Ph.A. of a life-size picture of Dr. Herman

Hager, dedicated by the New-Yorker Deutscher Apotheker-Verein.

The following officers were elected for this section for the ensuing year: Chairman, W. L. DuBois, New York; secretary, L. E. Sayre, Kansas; and historian, E. G. Eberle, Philadelphia.

THE WOMEN'S SECTION.

Two sessions of the Women's Section were held. At the opening session a vocal solo and a piano recitation were rendered by Miss Margaret Martin; an address of welcome by Mrs. George M. Andrews; and the presidential address by Mrs. G. D. Timmons, of Indiana. Other features of the program in the Women's Section were an address by Professor John Uri Lloyd, and a paper on "Pharmacy as a Vocation for Women," by Mrs. Ray Kenaston, of Bonesteel, South Dakota.

New officers for the Women's Section were elected as follows: Mrs. E. A. Ruddiman, Tennessee, president; Mrs. John F. Hancock, Boston, honorary president; and Mrs. G. D. Timmons, Indiana, chairman of the executive committee.

CLOSING GENERAL SESSION.

At the closing general session held on Friday, the report of the committee on time and place of meeting and the report of the committee on president's address consumed most of the time. The lengthy discussion of something over one hour resulted in Indianapolis being chosen as the next meeting place, the exact time to be set by the council. The report of the committee on president's address, while comprehensive was not conclusive, as the president's address was very lengthy and contained many details upon which the committee could not agree. The committee recommended that their report, which provided for a continuation of the committee, be received. After considerable discussion, which at times grew almost acrimonious, the recommendation of the committee was adopted.

A recommendation referred by the Section on Education and Legislation was presented for adoption in the general session. The recommendation requested the appointment of a committee of three to work with the voluntary conference for the purpose of completing the A.Ph.A. model pharmacy laws. Recommendation duly adopted.

The final report of the committee on membership showed that there had been four hundred and forty-eight new members elected, which was stated to be the highest number elected during any one year in the history of the Association.

Resolutions of thanks to the local secretary and his associates, the New York and Philadelphia branches, and the New Jersey Pharmaceutical Association, and also to the hotel management were adopted. The formality of installing officers was dispensed with on account of the absence of Dean F. J. Wulling, of Minnesota, the new president. No other business being offered, the convention adjourned.

AMERICAN CONFERENCE OF PHARMACEUTICAL FACULTIES.

SEVENTEENTH ANNUAL CONVENTION.

PHILADELPHIA, SEPTEMBER 1-2, 1916.

The seventeenth annual meeting of the American Conference of Pharmaceutical Faculties was held in Philadelphia, September 1 and 2. The sessions were largely taken up by the reports from the sixteen committees which were appointed as a result of the address of President F. J. Wulling one year ago.

President H. V. Arny presided and presented a very able address containing many recommendations, the following of which were adopted:

1. That committee number 3 be continued and that the committee be requested to investigate pharmacy courses in high schools and report at the next meeting of the conference.

2. That two years of high school work be recommended to all colleges as an entrance requirement in 1917.

h

e

it

d

e

ee

g

d.

at

đ,

3. That a joint committee from conference and boards shall endeavor to secure the co-operation of the legislative committee of each state pharmaceutical association in arranging for a referendum vote on prerequisite legislation, to be participated in by all of the registered pharmacists of the state in question (approved at joint meeting of Conference and Boards).

4. Providing for a continuation of the sixteen special committees for the coming year and directing the executive committee to consider the advisability of retaining some as standing committees.

The Syllabus Committee reported that plans were being made to

issue a third edition of the syllabus in 1919, to become effective in 1920. Eventually they hope to revise only every ten years.

It was voted that two classes of memberships in the conference be not recognized at this time. The majority of members seemed to feel that such a procedure would not give as much encouragement to short course schools as the present method.

The Committee on Higher Educational Standards recommended that inasmuch as the N.A.B.P. at their 1915 meeting recommended that in 1920 boards of pharmacy should require four years of high school training preparatory to the taking of an examination, they felt that it is now time for the conference to take action making the four years high school requirement binding for all institutions holding membership in the conference with the beginning of the academic year 1920–21.

The Committee on Alumni Activities reported that the colleges through some faculty member or members can greatly stimulate alumni activity. The alumni should be cultivated in order to afford the reciprocal advantage of continuing faculty interest and influence upon former students and also to create and maintain the help and co-operation of the alumni for the college. They recommended that their report be sent to the secretary of the alumni association of each college with the request that same be given thoughtful consideration.

The Committee on Curriculum reported that the curriculum should be divided into three main departments, but that pharmacy should have slightly more than one-third of the work. The following percentage values were suggested: chemistry, 30 per cent.; materia medica, 30 per cent.; pharmacy, 40 per cent.

Business and law sub-courses are very proper parts of the curriculum.

Book research courses of reading and the cultivation of medicinal plants are valuable lines of work and credit should be allowed.

The Committee on College Bulletins offered the following recommendation, which was adopted: That each college publish in tabular form in their bulletin their curriculum, stating the number of hours credit each course carries and a special number for each course; that a statement be given showing the number of lectures and quiz periods and hours devoted to laboratory work in each course.

The Committee on Questions and Examinations offered five recommendations, which were adopted. The recommendations were as follows:

1

g

C

S

e

d

P

d

it

h

n.

n

y

V-

le

al

n-

ar

rs

at

ds

ve

re

I. Resolved, That the work of the Committee on Questions and Examinations be continued; and that five sections of the Conference be authorized in order to effectively carry on the work.

2. Resolved, That the Secretary of the Conference notify the Faculty members of each School or College of Pharmacy of this action and ascertain in which section or sections the teachers wish to be enrolled and will serve.

3. Resolved, That the sub-sections shall be designated by the titles as indicated in the report, or in some form acceptable to the members, and that membership in each sub-section shall consist of at least one Faculty member from each School who is teaching the subject or subjects covered by the section to which he or she may belong.

4. Furthermore, Since the work of these respective sub-sections is intended for the benefit of the Board Examiners as well as for the teachers, therefore, be it further Resolved, That the members of the Boards of Pharmacy be informed of the action of Pharmaceutical Faculties and be invited to co-operate, and that the Board members examining candidates in subjects under the several subsections be requested to collaborate with the membership of such sub-sections and be kept informed of the progress of the particular work in which they may be interested.

5. Resolved, That each sub-section through its Chairman shall present an annual report of its work and that one session each year shall be devoted to the reading and discussion of the sub-section reports.

The report of the Committee on Prerequisite Arguments was presented and the following is a summary of the same:

I. Prerequisite legislation has had a fair test. It has been in operation in New York for eleven years. During this period four other states have adopted it by law and two by state board regulations. No serious efforts have been made to repeal these laws or regulations. The results have been satisfactory to the pharmacists of these states. There has been no shortage of clerks nor have clerks' wages been unduly advanced. Entrance requirements to the colleges have been increased with the result that a better educated class of young men are entering pharmacy.

2. Public welfare demands that the pharmacist be well trained. This training is not unduly expensive. Ambitious and energetic young men may be self-supporting, or nearly so, while attending

the schools of pharmacy. Quiz courses and courses by mail do not give the right training. Self-trained men are unlikely to be well trained.

- 3. The present and future welfare of pharmacy demand better preparation, both preliminary and professional, on the part of the young men entering its ranks. The underlying sciences and the related medical branches are developing rapidly: pharmacy must keep up or lose caste altogether.
- 4. Prerequisite legislation is coming. It is better that pharmacists should direct it and adjust it to their conditions rather than to have it framed by outsiders. Properly drawn prerequisite laws will work no hardship on anyone.

The Committee made the following recommendations:

The slow progress of prerequisite legislation in some of the states is due to the indifference and the lack of information on the part of druggists rather than to any feeling of hostility. In correspondence with state association secretaries a common expression is: "The prerequisite is coming but the time is not yet ripe for it." Druggists must be informed regarding prerequisite education and what it aims to accomplish. They must be frequently reminded of its bearing upon pharmaceutical progress. In short, they must be educated to an appreciation of its importance. Publicity must be sought not only through the pharmaceutical journals but also in the medical journals and in the newspapers.

As a first step in the education of druggists the legislative committee of this joint body should get into communication with the legislative committees of the state associations and should supply them with copies of this report or of such parts of it as may seem desirable. The request might be made that when the state legislature committee reports to its state association, a copy of this report be included.

A joint committee of the National Association of Boards of Pharmacy and the American Conference of Pharmaceutical Faculties should be appointed, with instructions to secure as much publicity as possible for the prerequisite movement.

The support of physicians individually, as well as of the state medical societies, should be sought. As a rule, physicians are quick to appreciate the importance of professional training based on adequate high school preparation.

A motion prevailed that the prerequisite arguments as presented

by this committee be published in the A.Ph.A. Journal at an early date and that reprints be supplied to members of the Conference, Boards of Pharmacy and the journals.

New Officers.—The officers of the American Conference of Pharmaceutical Faculties elected for the coming year are as follows: President, Dr. R. A. Lyman, University of Nebraska, Lincoln, Neb.; vice-president, Dean T. J. Bradley, Massachusetts College of Pharmacy, Boston, Mass.; secretary and treasurer, Dean Wilbur J. Teeters, University of Iowa, Iowa City, Ia.; executive committee: J. A. Koch, Pittsburgh, H. V. Arny, New York, W. B. Day, Chicago; syllabus committee, C. M. Snow, Chicago.

THIRTEENTH ANNUAL CONVENTION OF THE NATIONAL ASSOCIATION BOARDS OF PHARMACY.

By Prof. E. L. NEWCOMB.

The thirteenth annual convention of the National Association Boards of Pharmacy was called to order at 10.45 on Thursday morning, August 31, in the Assembly Room of the Bourse, Philadelphia, by the president, J. C. Burton, of Stroud, Oklahoma.

W. L. Cliffe, of the local committee, extended a hearty welcome to the visiting members, which was responded to by John Culley, of Utah.

President Burton called on Secretary H. C. Christensen, of Illinois, to call the roll. After the roll the secretary announced that twenty-eight states were represented.

e

t

f

đ

John A. Weeks, of Texas, addressed the Association on the subject, "The Responsibility of Pharmacy Boards." Mr. Weeks said in part, "The member of a board of pharmacy is in a measure responsible to every patient and every physician in his state for the work done by the licentiates of his Board. The judge on the bench into whose hands is thrust the power of passing the death sentence is a no graver or more responsible dispenser of justice than the man who passes on the fitness and qualifications of those who are to compound remedial agents for the sick. The examination of a candidate to practice pharmacy should be conducted without fear or favor and each candidate should be given the grade he earns.

"A very grave responsibility confronts us when we realize that

American pharmacy can never be stronger, better or more efficient than its state examining boards. When you place an O. K. on an unqualified man or woman you have perpetuated a wrong that can never be righted. The status of American pharmacy is established by the state boards. Neither the pharmacists nor the schools can establish the standards, since the state board is the gateway through which the pharmacist must enter the craft. I do not believe all boards are as careful as they should be, either in the preparation of the questions or in the grading of papers. I do not believe we take the position as seriously as we should or appreciate our responsibilities to the fullest extent."

Mr. Weeks urged that a standard of preliminary education be required of all those who seek to practice pharmacy, and that examinations be standardized, so that "registered pharmacists" will mean the same thing in every state.

The address was discussed by Messrs. Meridith, Diekman, Christensen, Diner, Osterlund, Leverty and others.

At the suggestion of J. A. Leverty, the subject "Identification of Applicants for Reciprocal Exchange" was discussed, with the result that a committee was appointed by the Chair to draft a plan of identification. H. L. Meredith, Maryland; H. L. Haussaman, North Dakota; and J. T. Baltar, Louisiana, constituted the committee.

This committee's report, which was presented by H. L. Haussaman, recommended a blank similar to a Traveler's Check to be signed by the applicant and attested by three citizens of the city in which the applicant resides; one of the witnesses shall be a former employer of the applicant or a registered pharmacist. The report of the committee was adopted.

At the opening of the afternoon session, on motion of H. C. Christensen, the application of the Mississippi Board of Pharmacy for active membership and the application of the New Jersey Board for associate membership were accepted.

President Burton at this point requested J. W. Gayle, of Kentucky, vice-president, to take the chair, and then proceeded with the "President's Address." Recommendations were as follows: First, that a committee of at least five be appointed from this body to present to the Section on Education and Legislation of the American Pharmaceutical Association such provisions as may be adopted by this Association; and, further, to co-operate in joint session with that Section, with a view to obtaining the adoption of a number of

"provisions" on matters of general interest to pharmacy that may be furnished to state board or state association members who may ask for suggestions regarding desirable changes in state pharmacy laws.

Recommendation No. 2: The same committee to submit resolutions of interest that may be passed by the N.A.B.P., to the A.Ph.A. for its endorsement.

Recommendation No. 3: Appointment of a committee on "Higher Educational Standards" to work with a similar committee from the A.Ph.A. and N.A.R.D.

Recommendation No. 4: Appointment of a committee of three on "Relations of Colleges with Boards," to work with a similar committee from the Faculties.

Recommendation No. 5: That the joint committee of the Faculties and Boards on "More Satisfactory Examination of Candidates for Graduation and Candidates for Board Certificates," be continued.

Recommendation No. 6: Be it hereby resolved that we request the Section on "Education and Legislation" of the A.Ph.A., in joint session with the Faculties and Boards, to give consideration to a "Prerequisite Provision" (graduation from school of pharmacy clause), that when enacted in a state pharmacy law will not be retroactive in its application, thereby preventing the Board of Pharmacy of such a state from granting reciprocal registration (both states being "active" member states of the N.A.B.P.) to applicants who are not graduates of schools of pharmacy but who at the time of passing examination and becoming registered in their state, complied with all the requirements of the laws of the state pertaining to registration of pharmacists, such laws having equal requirements at the time with the state in which the applicant may later seek to gain reciprocal registration.

On motion of H. L. Meredith, Chairman Gayle appointed W. H. Cousins, Texas; H. A. Eaton, Iowa; and D. R. Millard, Maryland, as a committee on the president's address. The committee later reported favorably on all recommendations made by the President, and on vote of the Convention they were adopted.

On resuming the Chair, President Burton called on George M. Beringer, Jr., of the New Jersey Board of Pharmacy. (This Board was elected to "associate membership" at the morning session.) Mr. Beringer stated that although the New Jersey Board had only just become affiliated with the Association, they had always taken

an active part in furthering the best interests of pharmacy and had for some time been alive to the good work being done by the Association, and were glad to be placed in a position to give greater assistance in bringing about continued progress.

Chairman Lawrence C. Lewis of the Executive Committee presented the report for his committee, which was referred to a committee consisting of the following named members: W. E. Sherriff, Kansas; Leo L. Mrazek, Illinois; H. E. Purdy, Connecticut. The committee later reported favorably on the following recommendations, which were then adopted by the Association:

Recommended that annual meetings of the N.A.B.P. be held at the same place as the A.Ph.A. conventions, on Monday and Tuesday of the same week in which the A.Ph.A. convention is held, Provided, however, that the program of sessions of the N.A.B.P., the A.Ph.A. and the joint sessions of the Faculties and Boards be arranged so that the most important sessions of these bodies will not conflict with each other. Otherwise, it is as suggested that it might become necessary to recommend that the N.A.B.P. and the A.C.P.F. hold their meetings either just preceding or just after the A.Ph.A. Convention. It was also suggested that unless the A.Ph.A. Conventions would be held in locations favorable to the largest possible attendance, it might become necessary for the Boards to hold their annual meetings separately from those of the A.Ph.A.

Recommended, that the Secretary attend board of pharmacy examination meetings in the various states whenever possible, with a view of bringing about compliance with recommendations of the Advisory Examination Committee (of which Secretary Christensen is chairman) with regard to more uniformity of examinations in the different states.

Recommended that changes in the new United States Pharmacopœia be not taken into consideration in preparing boards of pharmacy examination questions until after January 1, 1917, and that for the first year after that date only such changes as apply to the more potent drugs and their preparations be given consideration.

Recommended that state boards follow as closely as possible suggestions of the Advisory Examination Committee of the N.A.B.P. with regard to examination questions and methods.

Recommended that members of boards of pharmacy meet with those of adjoining states during examination periods whenever possible.

(To be continued)